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# **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method of reducing an organic compound of Formula IV:

$$R_8$$
 $R_{10}$ 
 $R_{11}$ 
 $R_{10}$ 

### wherein:

R<sub>s</sub> is an optionally substituted aromatic group;

 $R_{9}$ ,  $R_{10}$  and  $R_{11}$  are each independently selected from H, hydroxy,  $C_{1-6}$  alkoxy, mercapto,  $C_{1-6}$  alkylthio, amino,  $C_{1-6}$  alkylamino, di( $C_{1-6}$  alkyl)amino, carboxy,  $C_{1-6}$  alkoxycarbonyl,  $C_{1-6}$  alkylcarbamoyl, di- $C_{1-6}$  alkylcarbamoyl,  $C_{1-6}$  alkylcarbamoyl,  $C_{1-6}$  alkylcarbamoyl,  $C_{1-6}$  alkylsulphonyl, arylsulphonyl,  $C_{1-6}$  alkylaminosulphonyl, di( $C_{1-6}$  alkyl)aminosulphonyl, nitro, cyano, cyano- $C_{1-6}$  alkyl, hydroxy $C_{1-6}$  alkyl, amino- $C_{1-6}$  alkyl,  $C_{1-6}$  alkoxycarbonylamino,  $C_{1-6}$  alkanoyloxy,  $C_{1-6}$  alkyl, halo, halo  $C_{1-6}$  alkyl, or halo  $C_{1-6}$  alkoxy, alkoximino, hydroximino, and alkylimino; [[,]]

the method comprising subjecting the organic compound to a yeast-water paste of a yeast mediated reduction in the presence of an amount of water that is sufficient for enzymes to be hydrated and but insufficient to provide a <u>visible visibly</u> separate water layer wherein the reduction is conducted in the absence of any additional solvents, and wherein a water-to-yeast ratio is up to 1.5 ml/g.

### 2-3. (canceled)

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- 4. (previously presented) The method of claim 1, wherein the water-to-yeast ratio is between 0.2 ml/g and 1.5 ml/g.
- 5. (original) The method of claim 4, wherein the water-to-yeast ratio is between 0.8 and 1.2 ml/g of yeast.
- 6. (currently amended) The method of claim 1, wherein the reduction is conducted in the presence of water in an amount of 44% w/w to 55% w/w based on the weight of yeast.
- 7. (original) The method of claim 1, wherein the proportion of yeast to organic compound is from 0.1 gram of yeast per mmol of organic compound, up to 50 grams of yeast per mmol of organic compound.
- 8. (original) The method of claim 7, wherein the proportion of yeast to organic compound is 0.8 to 20 g/mmol.
- 9. (original) The method of claim 1, wherein the reaction is carried out in non-fermenting conditions at temperatures between 0 to 50°C.
- 10. (original) The method of claims 1, wherein the reaction is carried out at room temperature.
- 11. (original) The method of claim 1, wherein the reaction is conducted at atmospheric pressure.
- 12. (previously presented) The method of claim 1, wherein the method comprises the steps of contacting the organic compound with the yeast and water in the absence of any additional solvents to form a mixture, leaving the mixture for sufficient time for the

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reaction to take place, adding an organic solvent to the mixture to dissolve a product of the reaction into the organic solvent, and conducting a solid/liquid separation to separate the product of the reaction from the yeast.

13. (original) The method of claim 12, further comprising evaporating the solvent to isolate the product of the reaction.

## 14-15. (cancelled)

16. (withdrawn) The method of claim 1, wherein the organic compound is a compound of Formula I, II, or III:

in which:

R<sub>1</sub> is an optionally substituted aryl group;

 $R_2$ ,  $R_3$ ,  $R_5$  and  $R_6$  are H or optionally substituted  $C_1 - C_6$  alkyl;

 $R_4$  is an optionally substituted  $C_1 - C_6$  alkoxy, aryloxy, amino, optionally substituted di- $(C_1-C_6$ alkyl)amino, optionally substituted alkarylamino, optionally substituted  $C_1 - C_6$  alkylamino, optionally substituted cyclic amino, such as pyrrolidino, piperidino, imidazolidinyl, piperazinyl, morpholinyl,  $C_{1-6}$ alkylpyrrolidino or  $C_{1-6}$ alkylpiperidino; and

R<sub>7</sub> is cyano; nitro; halo; OH; NH<sub>2</sub>; C<sub>1-6</sub> alkyl substituted by OH, halo, amine, or C<sub>1-6</sub> alkylamino.

17. (withdrawn) The method of claim 16, wherein  $R_1$  is substituted or unsubstituted phenyl or 2-thienyl.

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- 18. (withdrawn) The method of claim 17, wherein the phenyl group contains one or more substituents selected from the group consisting of hydroxy, methyl, methoxy, hydroxymethyl and trifluoromethyl.
- 19. (withdrawn) The method of claim 16, wherein  $R_2$  is H, and  $R_3$  is either H, methyl or ethyl.
- 20. (withdrawn) The method of claim 16, wherein the compound is a compound of Formula (I), and  $R_4$  is selected from the group consisting of methoxy, ethoxy,  $C_{1-6}$  alkylamino,  $NH_2$ , and  $di(C_1-C_6alkyl)$ amino.
- 21. (withdrawn) The method of claim 16, wherein the compound is a compound of Formula (II), and  $R_5$  and  $R_6$  are each H.
- 22. (withdrawn) The method of claims 16, wherein the compound is a compound of Formula (III), and  $R_7$  is cyano, alkylhalo or  $C_{1-6}$  alkylamino.
- 23. (withdrawn) The method of claim 16, wherein the compound is precursor for the synthesis of a pharmaceutical selected from the group consisting of fluoxetine, tomoxetine, duloxetine, nisoxetine, epinephrine, norepinephrine, ethylnorepinephrine, isoproterenol, isoetharine, metaproterenol, terbytaline, metaproterenol, phenylephrine, ritodrine, prenalterol, methoxamine, albuterol or a derivative thereof, salmeterol, ephedrine and phenylpropanolamine and the method further comprises the step of converting the precursor into the pharmaceutical.

### 24. (cancelled)

25. (currently amended) The method of claim  $\frac{24}{1}$ , wherein one of  $R_9$ ,  $R_{10}$  and  $R_{11}$  is not H.

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- 26. (currently amended) The method of claim  $\frac{24}{1}$ , wherein the group R<sub>8</sub> is selected from the group consisting of phenyl, substituted phenyl, napthyl and substituted napthyl.
- 27. (currently amended) The method of claim  $\frac{24}{1}$ , wherein  $R_{10}$  and  $R_{11}$  are each H, and  $R_9$  is carboxy or  $C_{1-6}$  alkoxycarbonyl.
- 28. (currently amended) The method of claim  $\frac{24}{1}$ , wherein  $R_9$  is H or hydroxy, one of  $R_{10}$  and  $R_{11}$  is selected from  $C_{1-6}$ alkyl, and the other of  $R_{10}$  and  $R_{11}$  is selected from the group consisting of  $C_{1-6}$ alkoxycarbonyl,  $C_{1-6}$ aryloxycarbonyl, carbamoyl,  $C_{1-6}$ alkylcarbamoyl, di- $C_{1-6}$ alkylcarbamoyl,  $C_{1-6}$ cycloalkylcarbamoyl and nitro.
- 29. (currently amended) The method of claim  $\frac{24}{1}$ , wherein  $R_9$  is hydroxy, one of  $R_{10}$  and  $R_{11}$  is selected from H and  $C_{1-6}$ alkyl, and the other of  $R_{10}$  and  $R_{11}$  is selected from the group consisting of cyano,  $C_{1-6}$ alkoxycarbonyl,  $C_{1-6}$ aryloxycarbonyl, carbamoyl,  $C_{1-6}$ alkylcarbamoyl, di- $C_{1-6}$ alkylcarbamoyl, and  $C_{1-6}$ cycloalkylcarbamoyl.
- 30. (currently amended) The method of claim 25 1, wherein the compound of Formula (IV) is a precursor for the synthesis of a pharmaceutical selected from the group consisting of fluoxetine, tomoxetine, duloxetine, nisoxetine, epinephrine, norepinephrine, ethylnorepinephrine, isoproterenol, isoetharine, metaproterenol, terbytaline, metaproterenol, phenylephrine, ritodrine, prenalterol, methoxamine, albuterol or a derivative thereof, salmeterol, ephedrine and phenylpropanolamine, amphetamine or a derivative thereof, hydroxyamphetamine, methamphetamine, benzphetamine, fenfluramine, propylhexedrine, ibuprofen, naproxen, alminoprofen, fenoprofen, flurbiprofen, indoprofen, ketoprofen and suprofen, the method further comprising the step of converting the precursor into the pharmaceutical.
- 31. (currently amended) A method of synthesizing a synthesizing an enantiomerically specific pharmaceutical compound, comprising: the step of subjecting a precursor to an organic compound to a yeast-water paste to a yeast mediated reduction to form an enantiomerically specific precursor; and converting the enantiomerically specific precursor

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to the enantiomerically specific pharmaceutical compound, wherein the reduction is conducted in the absence of a solvent other than water; and converting the product of the reduction reaction into the pharmaceutical compound carried out in the presence of water and in the absence of any other solvents, the water is of an amount that is sufficient for yeast enzymes to be hydrated and insufficient to provide a visibly separate water layer, the reduction is provided with a water-to-yeast ratio of up to 1.5 ml/g, and the organize compound is a compound of Formula IV:

$$R_8$$
 $R_{11}$ 
 $R_{10}$ 
 $R_{11}$ 

### wherein:

 $R_8$  is an optionally substituted aromatic group;

 $R_9$ ,  $R_{10}$  and  $R_{11}$  are each independently selected from H, hydroxy,  $C_{1\text{-6}}$  alkoxy, mercapto,  $C_{1\text{-6}}$  alkylthio, amino,  $C_{1\text{-6}}$  alkylamino, di( $C_{1\text{-6}}$  alkyl)amino, carboxy,  $C_{1\text{-6}}$  alkoxycarbonyl,  $C_{1\text{-6}}$  alkylcarbamoyl, di- $C_{1\text{-6}}$  alkylcarbamoyl,  $C_{1\text{-6}}$  alkylcarbamoyl,  $C_{1\text{-6}}$  alkylcarbamoyl,  $C_{1\text{-6}}$  alkylcarbamoyl,  $C_{1\text{-6}}$  alkylcarbamoyl,  $C_{1\text{-6}}$  alkylsulphonyl, arylsulphonyl,  $C_{1\text{-6}}$  alkylaminosulphonyl, di( $C_{1\text{-6}}$  alkyl)aminosulphonyl, nitro, cyano, cyano- $C_{1\text{-6}}$  alkyl, hydroxy $C_{1\text{-6}}$  alkyl, amino- $C_{1\text{-6}}$  alkyl,  $C_{1\text{-6}}$  alkoxycarbonylamino,  $C_{1\text{-6}}$  alkanoyloxy,  $C_{1\text{-6}}$  alkyl, halo, halo  $C_{1\text{-6}}$  alkyl, or halo  $C_{1\text{-6}}$  alkoxy, alkoximino, hydroximino, and alkylimino.

32. (original) The method of claim 31, wherein the pharmaceutical compound is a sympathomimetic amine, an ethyl amine, a propylamine or a propionic acid.

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- 33. (original) The method of claim 32, wherein the pharmaceutical compound is an arylethylamine, an arylpropylamine, or a propionic acid with a 2-aryl substitution.
  - 34. (withdrawn) A product produced by the method of claim 1.
- 35. (previously presented) The method of claim 1, wherein the organic compound and the yeast-water paste forms a moist pliable yeast.
- 36. (previously presented) The method of claim 1, wherein the method avoids biphasic extractions before the step of adding the organic solvent to the mixture.
- 37. (previously presented) The method of claim 1, wherein the yeast mediated reduction is carried out in non-fermenting conditions.